

**METHOD AND APPARATUS FOR ENHANCING THERMAL STABILITY,
IMPROVING BIASING AND REDUCING DAMAGE FROM ELECTROSTATIC
DISCHARGE IN SELF-PINNED ABUTTED JUNCTION HEADS HAVING A
SELF-PINNED BIAS LAYER EXTENDING BEYOND THE FREE LAYER**

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ABSTRACT

A method and apparatus for enhancing thermal stability, improving biasing and reducing damage from electrical surges in self-pinned abutted junction heads. The head includes a free layer having a first end and a second end defining a width selected to form
10 a desired trackwidth and an extended self-pinned bias layer extending beyond the ends of the free layer, the self-pinned bias layer extending beyond the free layer increasing the volume of the extended self-pinned bias layer to provide greater thermal stability and stronger pinning of the free layer.